What we claim is:

1. A network-centric service distribution architecture that integrates a wireless access service in a local Residential/Business Broadband Network (RBN) environment through the use of a local RBN to a service provider's broadband transport network and to a service provider's broadband packet network that facilitates end-to-end packet telecommunication services, wherein the RBN of the network-centric service distribution architecture comprises:

a Media Terminal Adapter, coupled to at least one access port (AP) and to the service provider's broadband transport network, for providing access functions for connecting the service provider's broadband packet network via the service provider's broadband transport network with the RBN, the at least one access port, coupled to the Media Terminal Adapter, arranged to receive and send wireless signals to a plurality of wireless RBN devices; and

a Network Server Platform (NSP), coupled to the service provider's broadband packet network, for controlling and administering operations and services of the access port and the plurality of wireless RBN devices associated thereto.

2. The architecture of claim 1 wherein the architecture supports interworking among the wireless devices within the local RBN environment.

3. The architecture of claim 1 wherein said architecture supports telephony interworking among the TIA/EIA-136 handsets, EDGE/GRPS handsets and the IEEE 802.11b devices within the local RBN environment.

4. The architecture of claim 1 wherein said architecture supports interworking between the wireless RBN devices in one of: home, SOHO, and business environments and wireless RBN devices in a public cellular environment.

5. The architecture of claim 4, wherein said NSP is further an integral part of said SOHO and said business environment.

6. The architecture of claim 1, wherein the AP is a miniaturized radio base station that interworks with air interfaces including Global System for Mobile Communication (GSM), IS-95, IEEE 802.11b, TIA/EIA-136, IEEE 802.15, Cellular Digital Packet Data (CDPD), Call Division Multiple Access (CDMA), CDMA2000, Wideband CDMA (WCDMA), Personal Handyphone System (PHS) and IS 95 High Data Rate (HDR).

7. The architecture of claim 1 wherein said architecture supports telephony interworking among TIA/EIA-136 handsets, EDGE/GRPS handsets and IEEE 802.11b devices in one of: home, SOHO, and business environments and TIA/EIA-136 handsets, EDGE/GRPS handsets and the IEEE 802.11b devices in a public cellular environment.

8. The architecture of claim 1 wherein the RBN provides at least one access port to at least one of: a residence, a Small Office-Home Office (SOHO), a business and a public user environment.

9. The architecture of claim 1 wherein the RBN is coupled to the service provider's broadband transport network, and further wherein said service provider's broadband transport network comprises at least one of: a hybrid fiber coaxial cable system, xDSL, fixed wireless, and fiber optic.

10. The architecture of claim 1 further including a private branch exchange (PBX) coupled to the Media Terminal Adapter and, in turn, to the service provider's broadband transport network and to the service provider's broadband packet network for delivery of packet telecommunications services.

11. The architecture of claim 10 where there is at least one wired telephone connected to the PBX and a wireless telecommunication device communicating with the access port behaves as a cordless extension of the wired telephone.

12. The architecture of claim 10 wherein the private branch exchange is further coupled to a Public Switched Telephone Network (PSTN) for circuit-switched telecommunication services.

13. The architecture of claim 1 wherein the NSP administers the wireless RBN devices being served by the at least one access port, including call processing, Operation, Administration and Maintenance (OA&M), terminal mobility, personal mobility, location mobility, and RF management.

14. The architecture of claim 1 wherein the NSP interworks with at least one of: other servers and gateways (GWs) to establish an end-to-end call.

15. The architecture of claim 1 wherein the NSP also functions as a transaction server that participates in call processing and controls access to network resources.

16. The architecture of claim 1 wherein the NSP translates E.164 addresses to destination IP addresses either internally or by accessing a Directory Server.

17. The architecture of claim 1 wherein the NSP platform physically consists of a plurality of servers.

18. The architecture of claim 1 wherein the access port is a miniaturized radio base station for establishing analog and digital communications channels, and interworks between wireless and packet telephony protocols.

19. The architecture of claim 1 wherein the RBN is a home network.

20. The architecture of claim 1 wherein the RBN is a business network.

21. The architecture of claim 1 wherein the access port connection to the Media Terminal Adapter is an Ethernet interface.

22. The architecture of claim 18, wherein the access port provides voice transcoding.

23. The architecture of claim 1 wherein the access port and the Media Terminal Adapter are integrated into a single unit to provide functions of the access port and the Media Terminal Adapter.

24. The architecture of claim 23 wherein the Media Terminal Adapter (MTA) is integrated with one of a cable and an xDSL modem, to form a single unit, wherein said single unit digitally encodes a multimedia signal to form an encoded signal, encapsulates the encoded signal in IP packets, and delivers the IP packets to the service provider's broadband packet network via the service provider's broadband transport network via one of the cable and the xDSL modem.

25. The architecture of claim 24, wherein said single unit provides voice transcoding.

26. The architecture of claim 24, wherein said multimedia signal is an analog signal.

27. The architecture of claim 24, wherein said multimedia signal is a digital signal.

28. The architecture of claim 24 wherein the MTA maintains a call state for each active telephone line and participates in call signaling and telephony feature implementation.

29 The architecture of claim 28 wherein there is at least one wired telephone connected to the MTA and a wireless telecommunication device communicating with the access port behaves as a cordless extension of the wired telephone.

30. The architecture of claim 29 wherein one of the cable and the xDSL modem receives IP packets from one of the Media Terminal Adapter and a personal computer and packages and sends packaged IP packets through the service provider's broadband transport network using one of a cable interface and an xDSL interface.

31. The architecture of claim 23 wherein the single unit is an intelligent broadband access point unit.

32 The architecture of claim 31 wherein there is at least one wired telephone connected to the intelligent broadband access port and a wireless telecommunication device communicating with the access port behaves as a cordless extension of the wired telephone.

33. The architecture of claim 1 wherein the plurality of associated wireless RBN devices includes home-business devices, computing-telephony resources and appliances.

34. The architecture of claim 1 wherein the access port supports at least one of a standardized air interface used for analog, digital, circuit, and packet communication to narrowband and broadband wireless devices, computing-telephony resources, and appliances.

35. The architecture of claim 34 wherein, when the access port communicates with wireless-enabled devices, a short message process is adapted to support home control service aspects.

36. The architecture of claim 34 wherein a communication link between the access port and the wireless RBN devices distributes call features and related operation, administration, maintenance and provisioning instructions via the Media Terminal Adapter, one of a hybrid fiber coaxial cable and a xDSL connection of the service provider's broadband packet network, and the service provider's broadband transport network to the RBN.

37. The architecture of claim 34 wherein a feature set and current state of all wireless Virtual Private Network-participating instruments is exchanged between all VPN terminations, followed by configuration of all wireless instruments to synchronize feature availability, appearance, and state.

38. A wireless access port (AP) apparatus for communicating with a network-centric service distribution architecture that supports RF protocols comprises:

a wideband radio, wherein said wireless radio supports wireless voice and data communication with wireless handsets;

a digital-to-analog converter (DAC) coupled to said wireless radio;

an analog-to-digital converter (ADC) coupled to said wireless radio;

a quad upconverter coupled to said DAC;

a quad downconverter coupled to said ADC;

a plurality of digital signal processors (DSPs) coupled to said quad digital upconverter and said quad digital downconverter;

a main processing unit coupled to said plurality of DSPs, said main processing unit further comprising memory; and

a timing and control unit coupled to said main processing unit for setting timing and control for radios, DSPs and for all elements of said AP.

39. The apparatus according to claim 38, wherein said main processing unit further comprises:

a PCMCIA slot; and

a wireless modem coupled to said PCMCIA slot, wherein said wireless modem supports voice and entertainment distribution.

40. The apparatus according to claim 38, wherein said main processing unit further comprises:

a Voice over Internet Protocol (VOIP)/ Ethernet processor for supporting data and IP telephony data, wherein said VOIP/Ethernet processor is coupled to memory; and

at least one 10/100 Mbit Ethernet PHY chip coupled to said VOIP/Ethernet processor, wherein said 10/100 Mbit Ethernet PHY chip performs analog modulation and demodulation function necessary to connect MAC functions within said VOIP/Ethernet processor to an attached Ethernet device.

41. The apparatus according to claim 39, wherein said main processing unit further comprises:

a Voice over Internet Protocol (VOIP)/ Ethernet processor for supporting data and IP telephony data, wherein said VOIP/Ethernet processor is coupled to memory; and

at least one 10/100 Mbit Ethernet PHY chip coupled to said VOIP/Ethernet processor, wherein said 10/100 Mbit Ethernet PHY chip performs analog modulation and demodulation functions necessary to connect MAC functions within said VOIP/Ethernet processor to an attached Ethernet device.

42. A Media Terminal Adapter (MTA) for communicating with a network-centric service distribution architecture via a broadband transport interface, wherein a service provider's broadband packet network distributes services to end devices via said MTA coupled to an access port (AP), wherein said MTA comprises:

a plurality of tip/ring control units for interfacing with analog telephone sets;

a plurality of dual SLIC circuits coupled to said tip/ring control units, wherein said dual SLICs provide connectivity to legacy analog telephone sets;

a Voice over Internet Protocol (VOIP)/Ethernet processor coupled to said plurality of dual SLICs, wherein said VOIP/Ethernet processor further comprises memory;

a main processing unit coupled to said VOIP/Ethernet processor, wherein said main processing unit further comprises memory;

a broadband transport interface coupled to said main processing unit;

a 10/100 Mbit Ethernet PHY chip coupled to said VOIP/Ethernet processor, wherein said 10/100 Mbit Ethernet PHY chip performs analog modulation and demodulation functions necessary to connect MAC functions within said VOIP/Ethernet processor to an attached Ethernet device; and

a timing and control unit coupled to said main processing unit for setting timing and control for protocols and for all elements of said MTA.

43. An Intelligent Broadband Access Point (IBAP) apparatus for communicating with a network-centric service distribution architecture via a broadband transport interface, wherein a service provider's broadband packet network distributes services to end devices via said IBAP and wherein said IBAP comprises:

a wideband radio, wherein said wireless radio supports wireless voice and data communication with wireless handsets;

a digital-to-analog converter (DAC) coupled to said wireless radio;

an analog-to-digital converter (ADC) coupled to said wireless radio;

a quad upconverter coupled to said DAC;

a quad downconverter coupled to said ADC;

a plurality of digital signal processors (DSPs) coupled to said quad digital upconverter and said quad digital downconverter;

a main processing unit coupled to said plurality of DSPs, said main processing unit further comprising memory;

a plurality of tip/ring control units for interfacing with analog telephone sets;

a plurality of dual SLIC circuits coupled to said tip/ring control units, wherein said dual SLICs provide connectivity to legacy analog telephone sets;

a Voice over Internet Protocol (VOIP)/Ethernet processor coupled to said plurality of dual SLICs, wherein said VOIP/Ethernet processor further comprises memory, further wherein said VOIP/Ethernet processor is coupled to said main processing unit;

a broadband transport interface coupled to said main processing unit;

a 10/100 Mbit Ethernet PHY chip coupled to said VOIP/Ethernet processor, wherein said 10/100 Mbit Ethernet PHY chip performs analog modulation and demodulation functions necessary to connect MAC functions within said VOIP/Ethernet processor to an attached Ethernet device; and

a timing and control unit coupled to said main processing unit for setting timing and control for radios, DSPs and for all elements of said IBAP, wherein said timing and control unit further provides control for all elements of said IBAP.

44. The apparatus according to claim 43, wherein said main processing unit further comprises:

a PCMCIA slot; and

a wireless modem coupled to said PCMCIA slot, wherein said wireless modem supports voice and entertainment distribution.

45. An Intelligent Broadband Access Point (IBAP) apparatus for communicating with a network-centric service distribution architecture via a broadband transport interface, wherein a service provider's broadband packet network distributes services to end devices via said IBAP and wherein said IBAP comprises:

an access point (AP); and

a Media Terminal Adapter (MTA) integated with said AP.